

3<sup>rd</sup> International Conference on

# PARKINSON'S DISEASE AND MOVEMENT DISORDERS

September 25-26, 2017 Chicago, USA

## Relationship between the stride length and cadence in patients with Parkinson's disease

**Mira Ambrus**

University of A Coruna, Spain

**Statement of the Problem:** Gait disturbances are one of the principal and most incapacitating symptoms of Parkinson's disease (PD). Few studies have measured the relationship between stride length and cadence (SLCrel) in PD patient point out to a decreased stride length (SL) with a particular difficulty in its internal regulation. Therefore, improvements of SL should represent the main goal in rehabilitation and exercise interventions in PD patients. However, changes in SL must be analyzed together with changes in cadence in order to elucidate which rehabilitation approach has a specific impact in PD rather than a generalized benefit from exercise. Moreover, it is imperative to know whether the SLCrel is a reliable analysis to be used as an evaluation procedure of gait disturbances in PD patients. The purpose of this study is to explore the reliability of the SLCrel in two different sessions separated by three months in a group of PD patients.

**Methodology:** 35 PD patients have participated in this study. In each session, patients were asked to walk at self-selected preferred, very slow, slow, fast and very fast speeds. SL and cadence were recorded for each speed and for individual linear regression analysis were conducted over those two parameters to determine the individual slope and interception.

**Findings:** The slope and interception of the SLCrel showed an excellent reliability in a three months period.

**Conclusion:** SLC reanalysis should be implemented in order to monitor gait changes in PD patients.

### Biography

Mira Ambrus has her experience in biomechanics, aging muscle strength and muscle in the field of sport science. She started to work early in research fields, during her Bachelor degree in Hungary. Then she decided to do her PhD in Spain under the supervision of Drs. Miguel Fernandezdel Olmo and Jose Andrés Sánchez Molina and started to work with patients who have Parkinson's disease (PD). Her aim is to improve the PD patients' movements, abilities, quality of life due to training and also to make the life more comfortable due to sport.

mira.aegeepecs@gmail.com

### Notes: